REMARKS

The present Amendment amends claims 1-14 and 19 and cancels claims 15-18. Therefore, the present application has pending claims 1-14 and 19.

Claims 1, 3, 4, 11, 15 and 19 stand rejected under 35 USC §102(e) as being anticipated by Cameron (U.S. Patent Application Publication No. 2003/0163647); and claims 2, 5-10, 12-14, 17 and 18 stand rejected under 35 USC §103(a) as being unpatentable over Cameron in view of Hirotani (U.S. Patent No. 5,982,887). As indicated above claims 15-18 were cancelled. Therefore these rejections with respect to claims 15-18 is rendered moot. These rejections with respect to the remaining claims 1-14 and 19 are traversed for the following reasons. Applicants submit that the features of the present invention as now more clearly recited in claims 1-14 and 19 are not taught or suggested by Cameron or Hirotani whether taken individually or in combination with each other as suggested by the Examiner. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw these rejections.

Amendments were made to claims 1-14 and 19 to more clearly recited that the present invention is directed to a cache control method in a computer system including a storage device, a node device and a plurality of clients, the node device, the storage device and a computer program executable by the node device.

According to the present invention the cache control method and a node device, the method being operable in the computer system having the storage device, the node device, external of the storage device, including a

disk device for cache, and the plurality of clients external of the storage and node devices, each being connected together. The cache control method controls the cache in the disk device by relating data processed in the computer system with attribute data configures a caching operation of the cache disk module that caches the processed data on the network, and mediating the processed data between the storage device and the client device via the network without the caching operation of the cache disk module when the attribute data prohibits the caching operation.

The node device includes a cache disk module for caching, and is connected to a storage device and a client device via a network. More particularly, the node device includes an obtaining unit that obtains attribute data related with data processed by the client device, wherein the attribute data is configured a caching operation of the cache disk module that caches the processed data on the network and a mediation unit that mediates the processed data between the storage device and the client device via the network without the caching operation of the cache disk module when the attribute data is configured to prohibit the caching.

The above described features of the present invention as now more clearly recited in the claims are not taught or suggested by any of the references of record, particularly Cameron or Hirotani whether taken individually or in combination with each other or any of the other references of record.

Cameron teaches the use of translation cacheable flags in a host coupled to a switched fabric including one or more fabric-attached I/O controllers. According to Cameron the host may comprise a processor; a host

memory coupled to the processor; and a host-fabric adapter coupled to the host memory and the processor and provided to interface with the switched fabric. The host-fabric caches selected translation and protection table (TPT) entries from the host memory for a data transaction, and flushes individual cached translation and protection table (TPT) entries in accordance with a translation cacheable flag.

Cameron teaches for example in Fig. 2 that the host-fabric adapter forms a part of the host and that the host-fabric adapter to improve speed maintains an internal cache that stores a subset of the TPT entries. Attention is directed to paragraphs [0031] – [0032] of Cameron.

Thus, in Cameron the alleged node device is not a node on the network external of all hosts and storage devices as in the present invention. This is an important feature in the according to the present invention the node device services a plurality of clients and storage devices that are interconnected to each other. In Cameron the host-fabric is personal to a specific host and as such is not useable by other hosts.

Further, each TPT entry in Cameron is used to translate a virtual address into a physical address. According each TPT entry is not data to be relayed by the node device as in the present invention. Further, the alleged attribute information forming a part of each TPT entry as taught by Cameron is intended to define memory areas of the memory 206 included in the host 110 that may or may not be accessible by the host-fabric adapter 220. Attention is directed to paragraphs [0030], [0031] and [0035] of Cameron.

The TPT entries as taught by Cameron are not data to be relayed nor do they include attribute information which indicates whether the data to be

relayed by the node device can be stored in the cache of the node device as in the present invention. In Cameron the cache of the host-fabric, which is not external of the host, stores selected ones of the TPT entries which as described above simply provides information for translating a virtual address into a physical address and indicates whether the corresponding address is accessible by the host-fabric or not contrary to the present invention as now recited in the claims.

Thus, Cameron fails to teach or suggest relating data processed in the computer system with attribute data which configures a caching operation of the cache disk module that caches the processed data on the network as recited in the claims.

Further, Cameron fails to teach or suggest that mediating the processed data between the storage device and the client device via the network without the caching operation of the cache disk module when the attribute data prohibits the caching operation as recited in the claims.

Still further, Cameron fails to teach or suggest that an obtaining unit that obtains attribute data related with data processed by the client device, wherein the attribute data configures a caching operation of the cache disk module that caches the processed data on the network as recited in the claims.

Still further yet, Cameron fails to teach or suggest a mediation unit that mediates the processed data between the storage device and the client device via the network without the caching operation of the cache disk module when the attribute data prohibits the caching operation as recited in the claims.

Therefore, Cameron fails to teach or suggest the features of the present invention recited in claims 1, 3, 4, 11 and 19. Accordingly, reconsideration and withdrawal of the 35 USC §102(e) rejection of claims 1, 3, 4, 11 and 19 as being anticipated by Cameron is respectfully requested.

The above noted deficiencies of Cameron are not supplied by any of the other references of record. Particularly, the above described deficiencies of the Cameron are not supplied by Hirotani. Therefore, combining the teachings of Cameron and Hirotani in the manner suggested by the Examiner in the Office Action still fails to teach or suggest the features of the present invention as now more clearly recited in the claims.

Hirotani is merely relied on by the Examnier for an alleged teaching of encrypting and decrypting data in memory. However, at no point is there any teaching or suggestion in Hirotani of the above described features of the present invention as recited in the claims shown above to be not taught or suggested by Cameron.

Therefore, the combination of Cameron and Hirotani fails to teach or suggest the features of the present invention as now more clearly recited in the claims. Accordingly, reconsideration and withdrawal of the rejection of claims 2, 5-10 and 12-14 under 35 USC §103(a) as being unpatentable over Cameron and Hirotani is respectfully requested.

The remaining references of record have been studied. Applicants submit that they do not supply any of the deficiencies noted above with respect to the references utilized in the rejection of claims 1-19.

In view of the foregoing amendments and remarks, applicants submit that claims 1-14 and 19 are in condition for allowance. Accordingly, early allowance of claims 1-14 and 19 is respectfully requested.

To the extent necessary, the applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C., Deposit Account No. 50-1417 (1288.43131X00).

Respectfully submitted,

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